I CLAIM:

1. A method for fabricating a leadframe structure comprising a chip mount pad and a plurality of lead segments, each having a first end near said mount pad and a second end remote from said mount pad, comprising the steps of:

forming said structure from a sheet-like starting material;

plating a layer of nickel on said leadframe;

selectively masking said second segment ends, thereby leaving said chip pad and said first segment ends exposed;

selectively plating a layer of palladium on said nickel layer on said exposed chip pad and segment ends in a thickness suitable for bonding wire attachment;

selectively masking said chip pad and said first segment ends, thereby leaving said second segment ends exposed; and

selectively plating a layer of tin onto said nickel layer on said exposed segment ends in a thickness suitable for parts attachment.

2. The method according to Claim 1 wherein said plating of said nickel layer and said plating of said selective palladium layer are performed in a first plating system providing for said palladium plating a wheel with apertures defining said selective locations.

3. The method according to Claim 1 wherein said plating of said tin layer is performed in a second plating system providing photo-imagible or printable plating masks.

4. The method according to Claim 3 wherein said second

plating system provides:

coating with a plating resist;

photoimaging;

developing said resist;

plating with tin;

stripping said resist;

rinsing; and

drying.

5. A method for fabricating a leadframe comprising the steps of:

stamping from a sheet-like copper or copper alloy starting material a leadframe having a mount pad for an integrated circuit chip and a plurality of lead segments having their first end near said mount pad and their second end remote from said mount pad;

in a first plating system, cleaning said leadframe in alkaline soak cleaning and alkaline electrocleaning;

activating said leadframe by immersing said leadframe into an acid solution, thereby dissolving any copper oxide;

immersing said leadframe into a first electrolytic nickel plating solution and depositing a first layer of nickel onto said copper, thereby fully encasing said copper;

immersing said leadframe into a second electrolytic nickel plating solution and depositing a second layer of nickel onto said first nickel layer, thereby adapting said second ends of said lead segments for mechanical bending and solder attachment;

selectively masking said second segment ends thereby leaving, through apertures in said wheel, said chip pad and said first segment ends exposed;

immersing said leadframe into an electrolytic palladium plating solution and depositing a layer of palladium onto said exposed segment ends in a thickness suitable for bonding wire attachment;

in a second plating system, selectively masking said chip pad and said first segment ends, thereby leaving said second segment ends exposed, said masking provided by photoresist coating, photoimaging, and resist developing;

immersing said leadframe into a tin flood cell plating solution and depositing a layer of tin onto said exposed second segment ends in a thickness suitable for parts attachment; and

stripping said photoresist, rinsing and drying.

6. The method according to Claim 5 wherein said first plating system is a wheel-based system, and said second plating system is a flood cell system.

7. The method according to Claim 5 wherein the process steps are executed in sequence without time delays, yet including intermediate rinsing steps.

8. The method according to Claim 5 wherein said acid solution may be sulfuric acid, hydrochloric acid or any other acid.

9. The method according to Claim 5 wherein said photoimaging of said photoresist uses a wheel with apertures defining the exposed area of said resist.